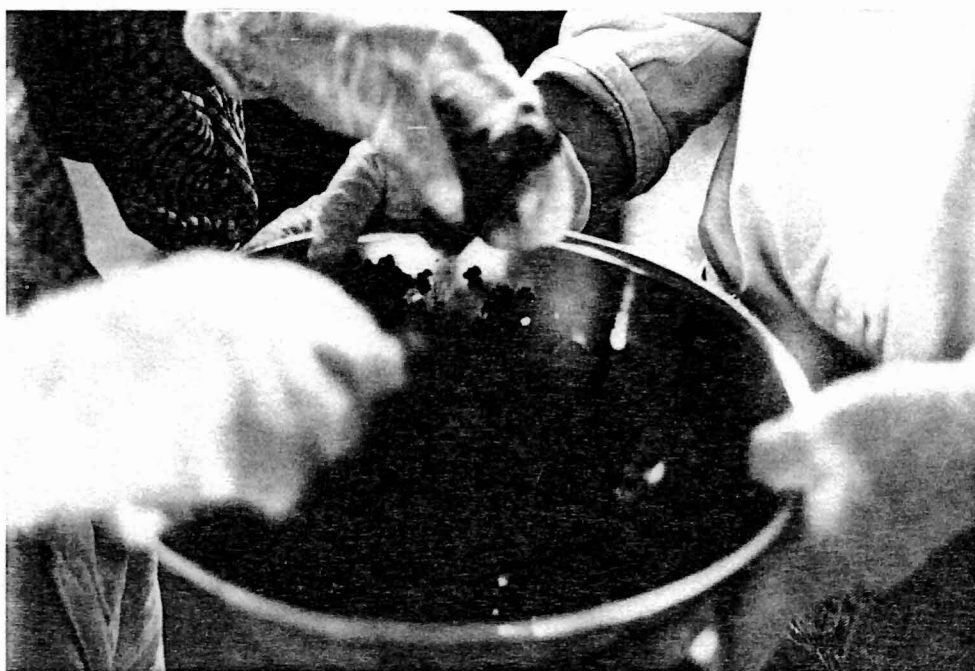
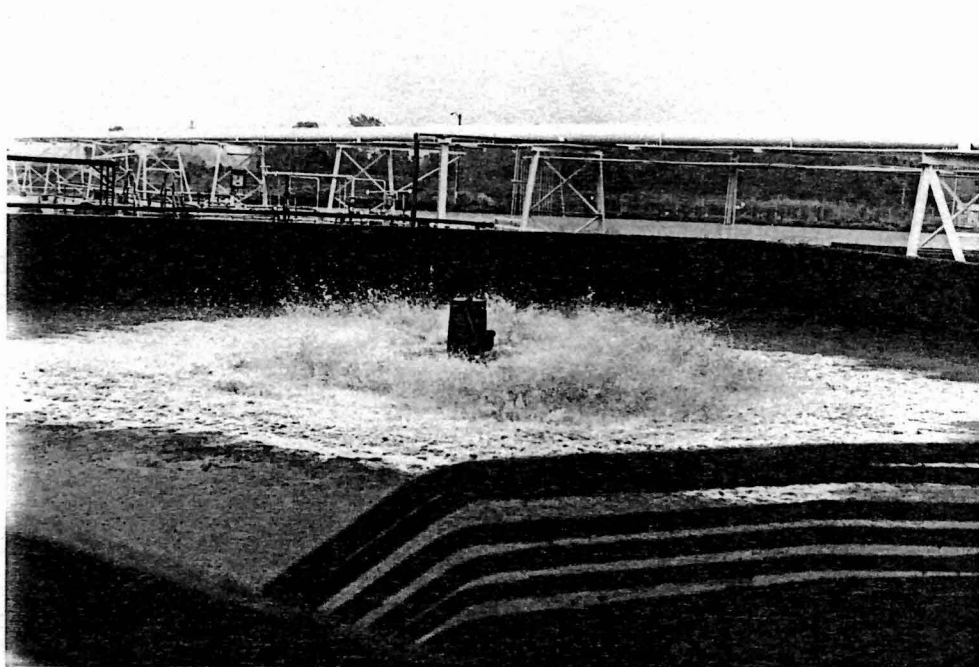




101. Close-up view of Digester sample collection area prior to Tank ET-1 after removal of surface layer of soil (G012).



102. View of VOA sample collection at Digester area (G012).



103. View of Digester looking northeast from approximately 15 feet west of sample collection area.



104. View of Digester sampling area after completion of sampling activities.
(Note: sampling activities interrupted by rainshower.)



105. Close-up of surface soil samples from Digester area (G012).



106. View of removal of surface layer of soil at Surge Tank ET-1 area.



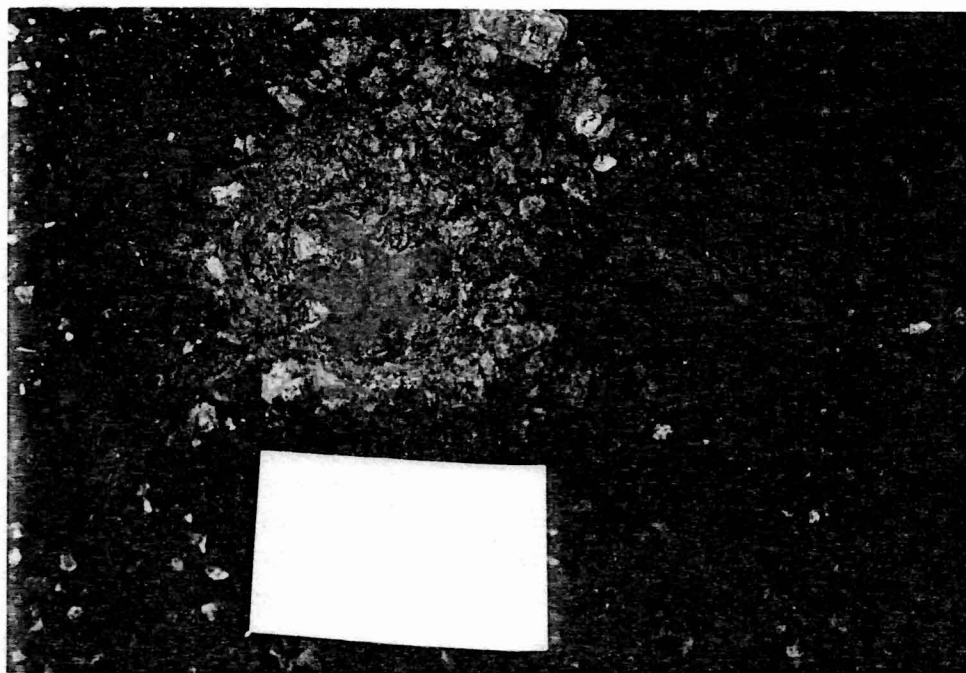
107. View of air monitoring following removal of surface layer of soil at Surge Tank ET-1 area (G013).



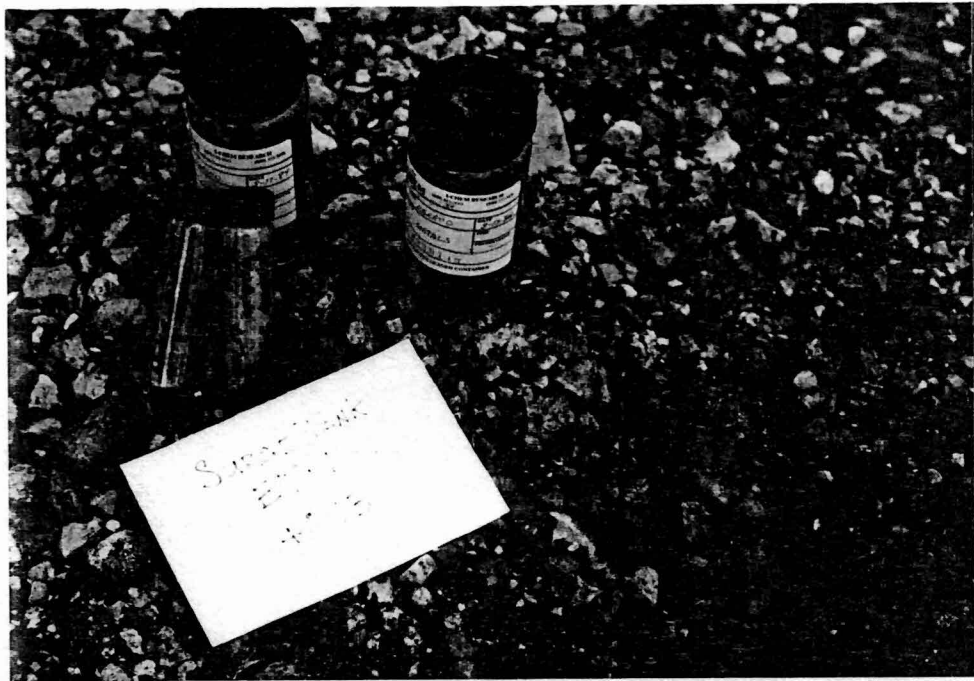
108. View of collection of VOA surface soil sample at Surge Tank ET-1 area (G013).



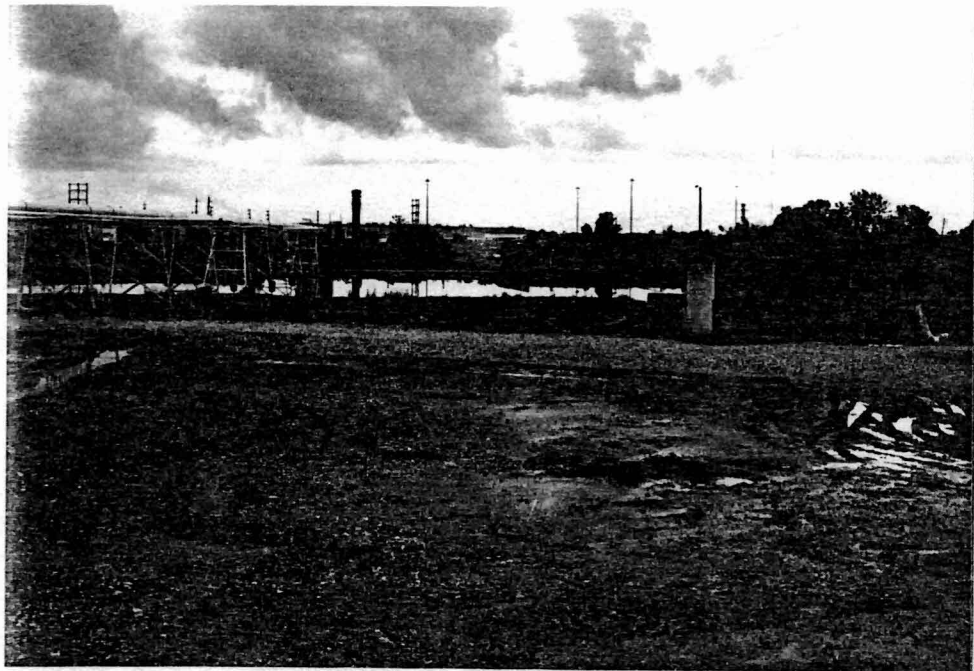
109. View looking southwest from Surge Tank ET-1 sample collection area.



110. Close-up of hole used for surface soil sample collection at Surge Tank ET-1 area (G013).



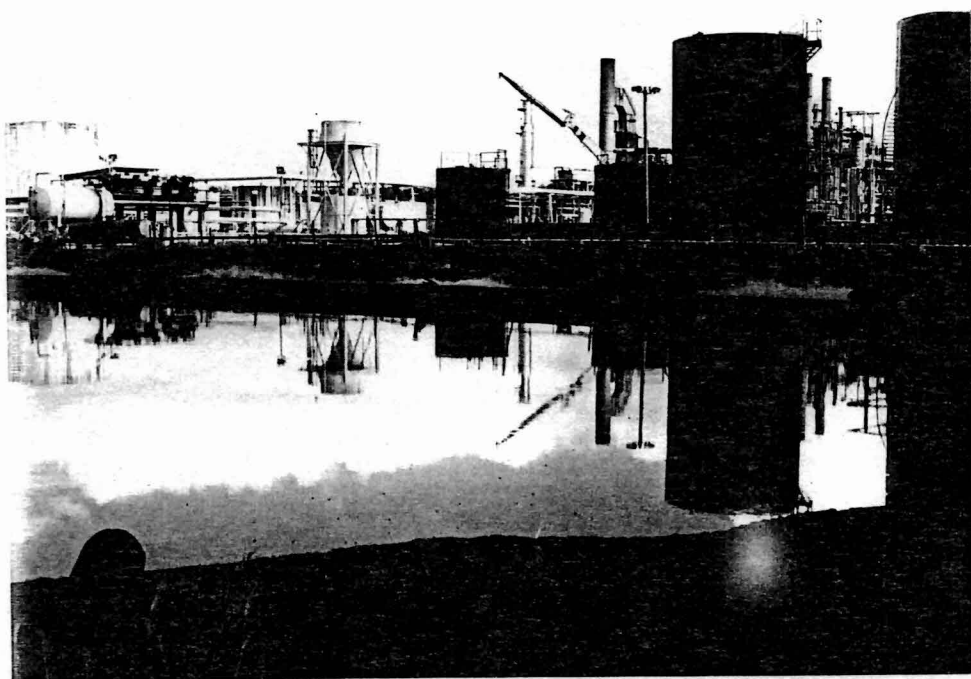
111. Close-up of surface soil samples from Surge Tank ET-1 area (G013).



112. View looking north from Surge Tank ET-1 sample collection area.



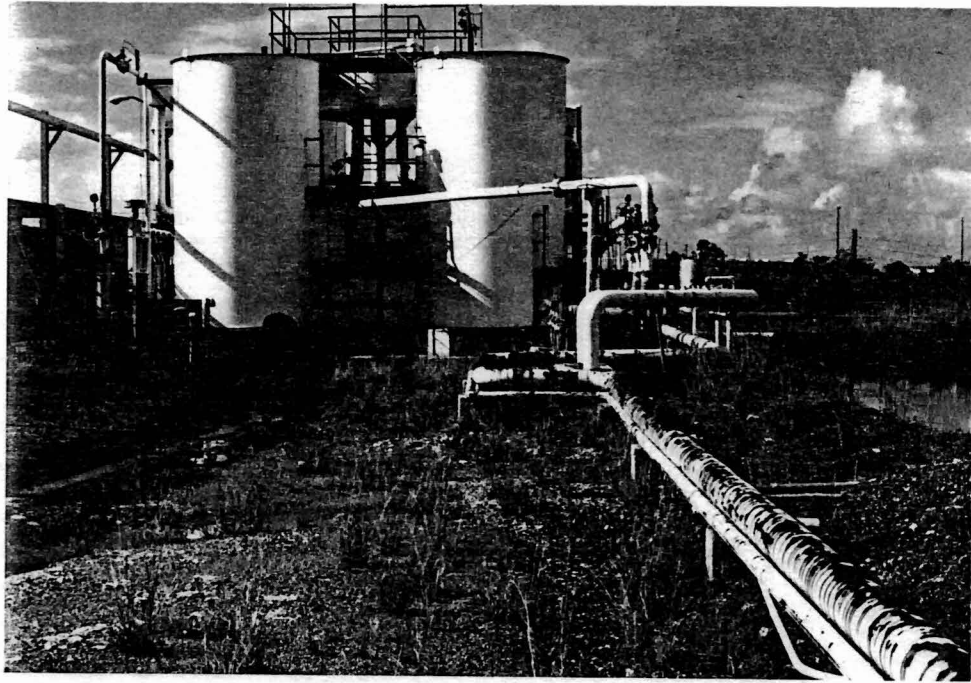
113. Close-up view of Surge Tank ET-1 area after completion of sampling activities (G013).



114. View from Equalization Basin (EB) sample collection area looking southeast.



115. View from EB sample collection area
looking southeast.



116. View from Equalization Basin sample collection area looking north.



117. View of air sampling prior to surface soil sample collection at Equalization Basin area (G014).



118. Close-up view of collection of VOA surface soil sample at EB area (G014).



119. Close-up view of VOA sample collection at EB area (G014).



120. Close-up view of organic/inorganics surface soil sample collection at Equalization Basin area (G014).



121. Close-up view of compositing of surface soil sample at EB area (G014).



122. Close-up view of quartering of surface soil sample at EB area (G014).



123. Close-up view of homogenizing surface soil sample at EB area (G014).



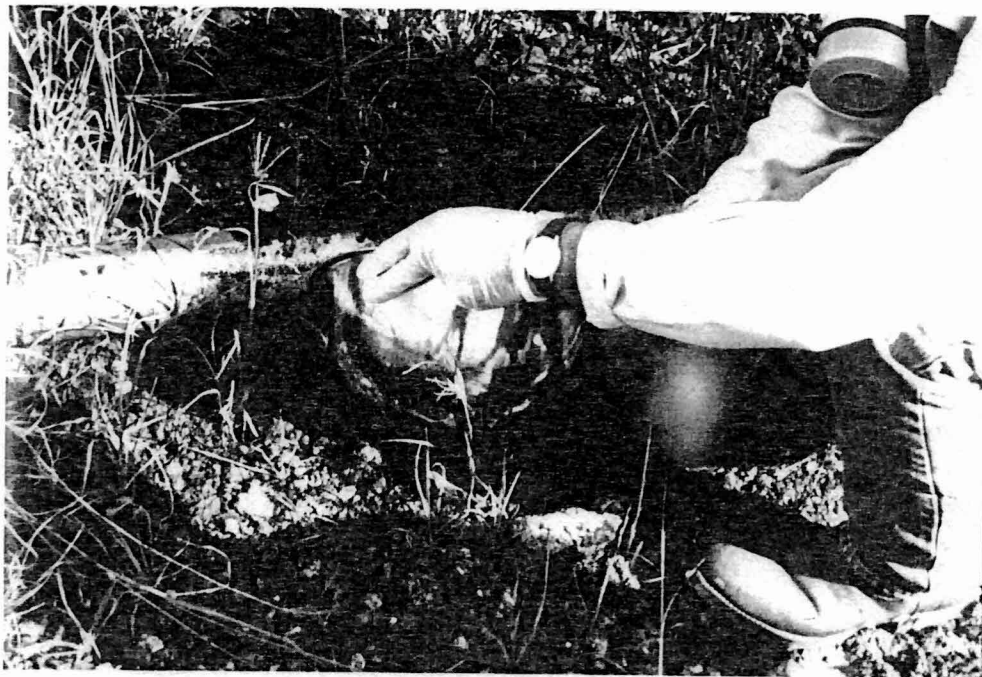
124. View of EB area organics/inorganics surface soil sample after compositing, quartering, and homogenizing (G014).



125. Close-up of organics/inorganics surface
soil sample collection at EB area (G014).



126. Close-up of hole used for surface soil sample collection at EB area (G014).



127. View of surface soil replacement at EB sampling area (G014).



128. View of soil compaction after soil sampling at EB area (G014).



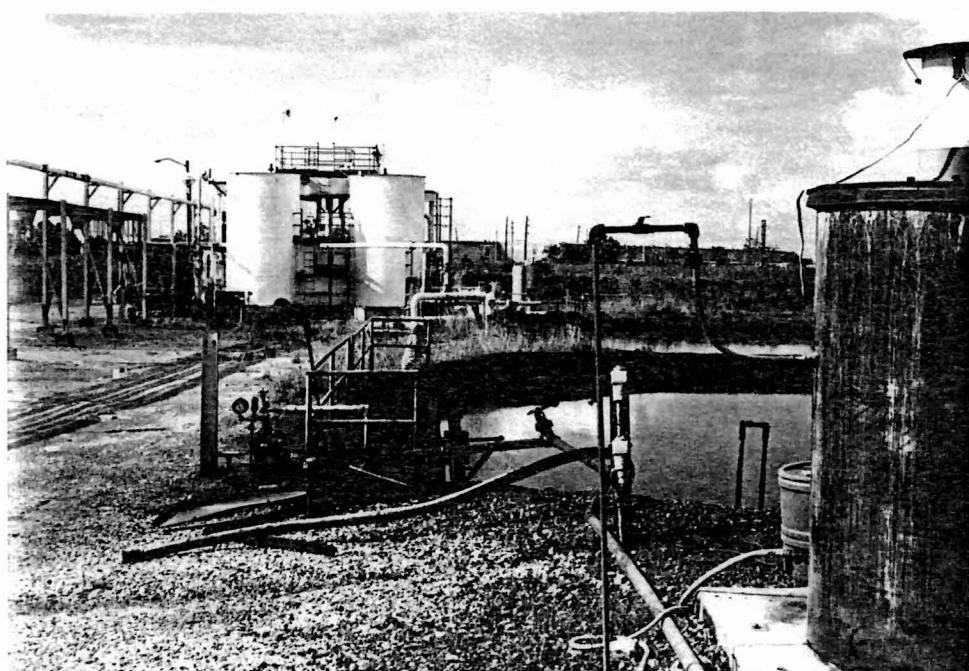
129. Surface soil samples from Equalization Basin area (G014).



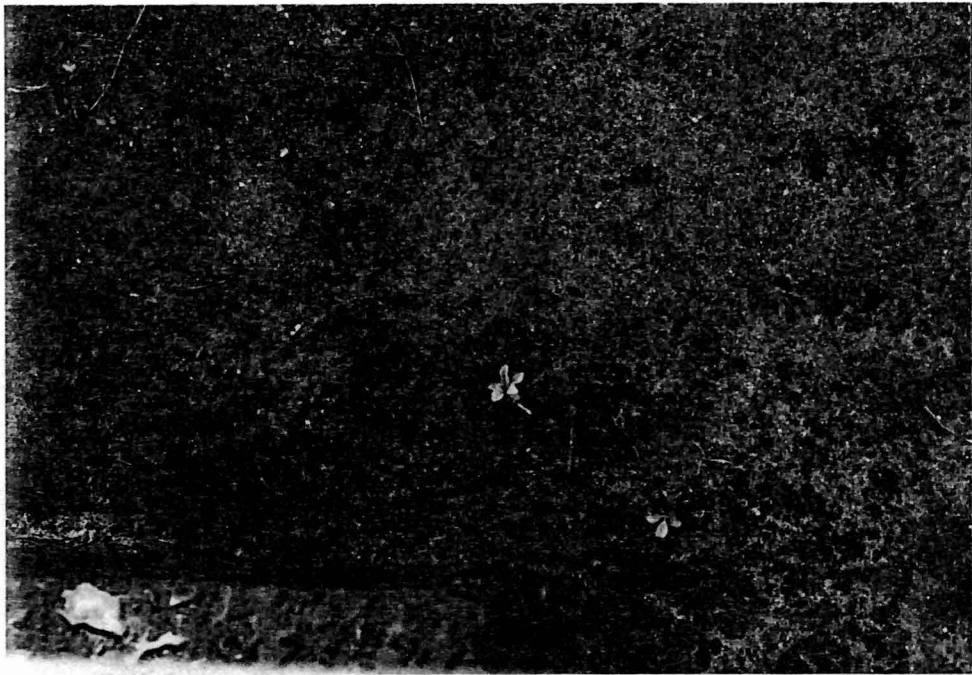
130. View of southwest corner of inlet basin at Biological Reactor.



131. View looking east from west end of
Biological Reactor.



132. View looking north towards Equalization
Basin sample collection area from west end
of Biological Reactor.



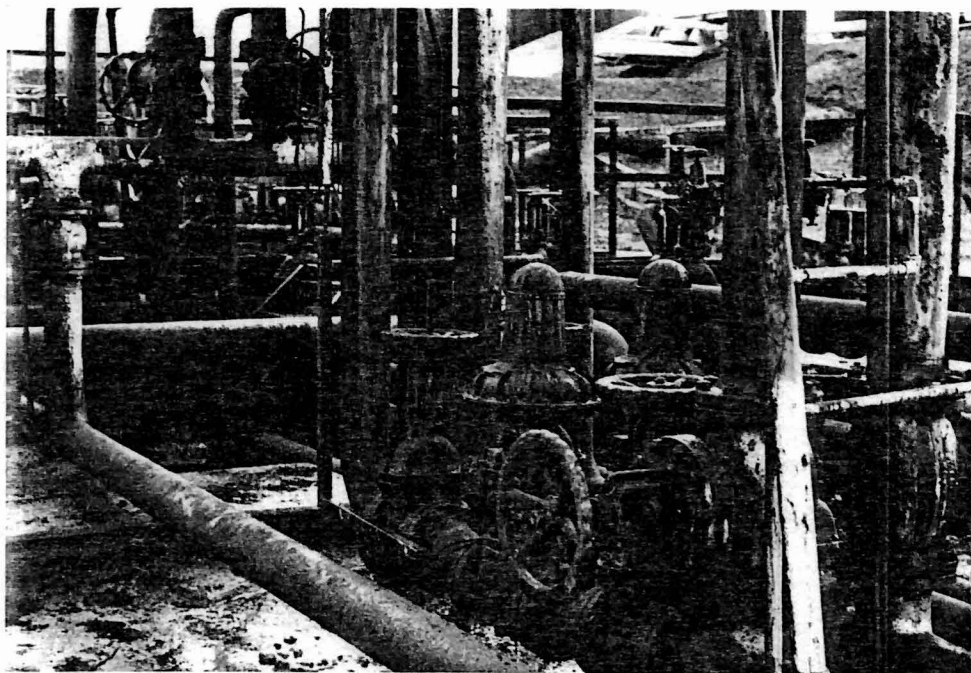
133. Close-up of sampling area prior to surface soil removal at Fuel Oil Transfer Pumps near Tank 603 (G015).



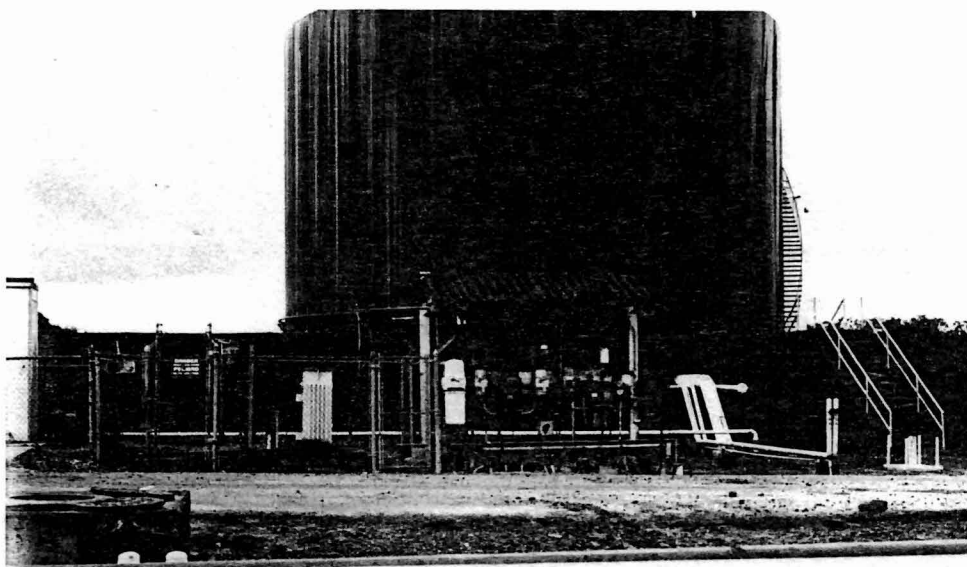
134. Close-up of surface soil removal at Fuel Oil Transfer Pumps near Tank 603 (G015).



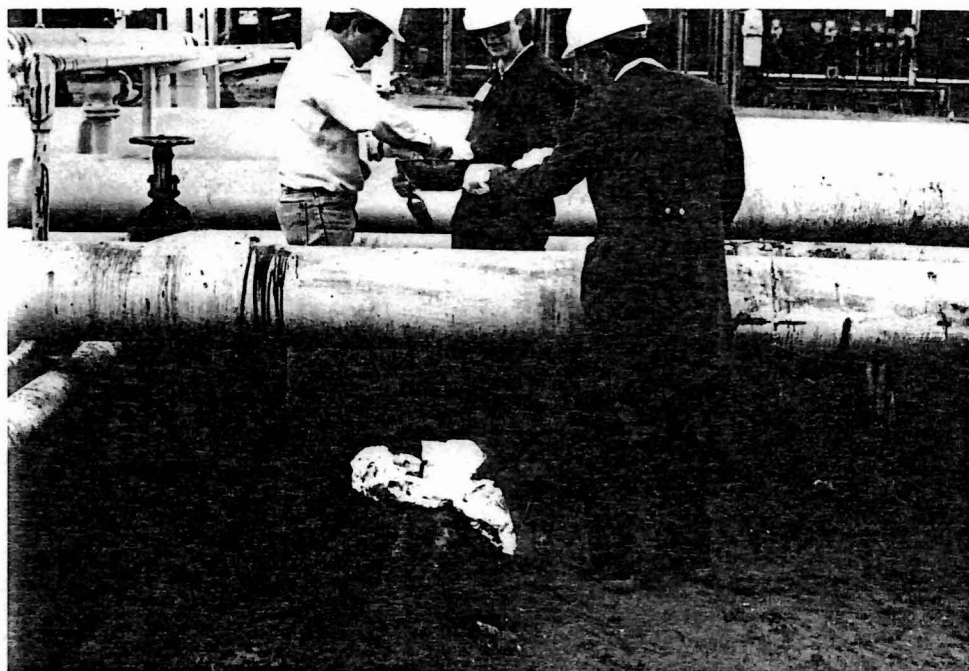
135. Collection of VOA samples at Fuel Oil Transfer Pumps near Tank 603 (G015).



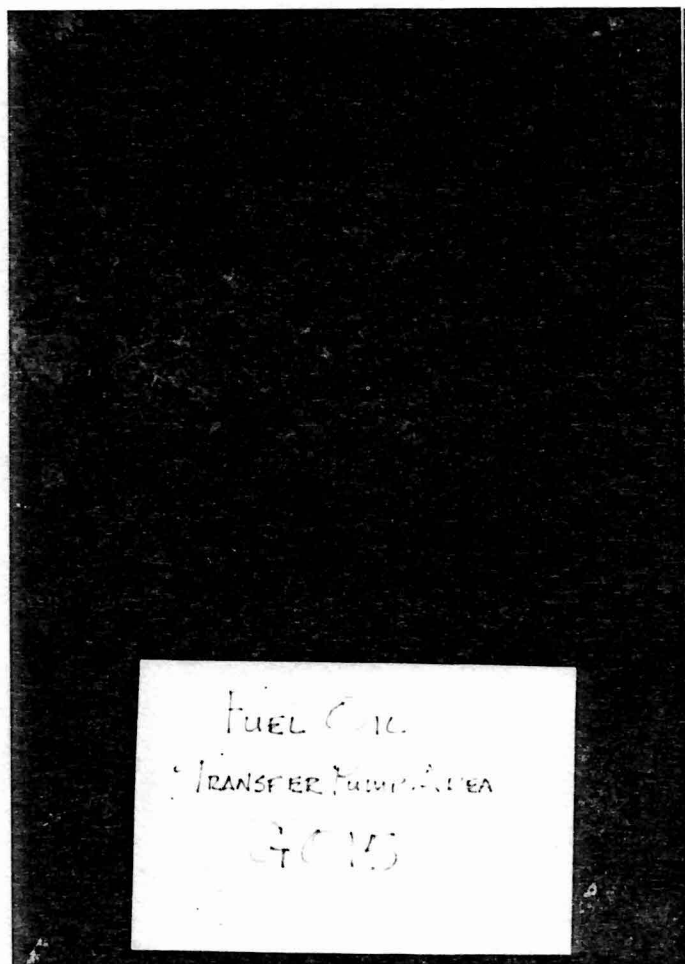
136. View looking southwest from Fuel Oil Transfer Pumps near Tank 603.



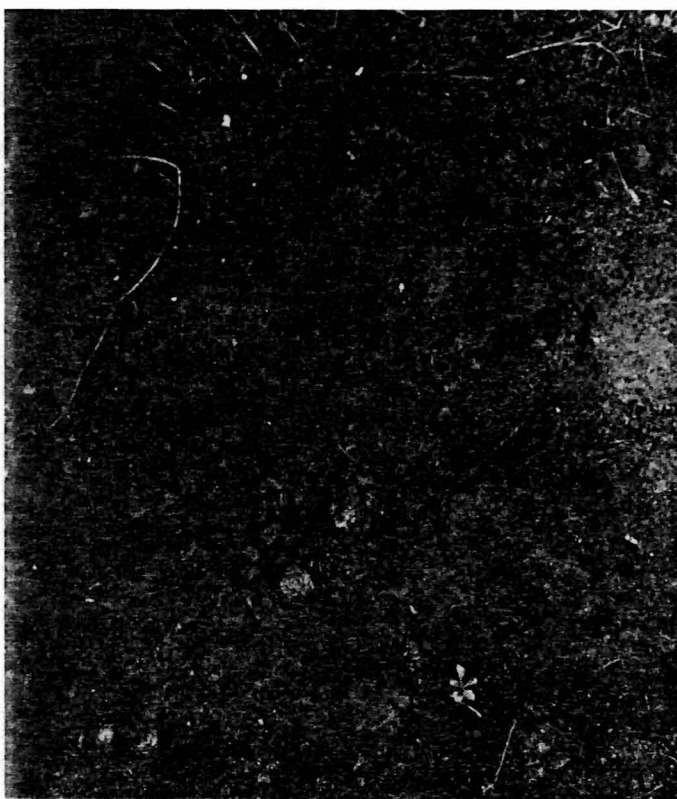
137. View looking northeast from Fuel Oil Transfer Pumps near Tank 603.



138. Far view of sample collection activities looking north towards Fuel Oil Transfer Pumps near Tank 103 (G015).



139. Close-up of hole used for sample collection at Fuel Oil Transfer Pumps near Tank 603 (G015).



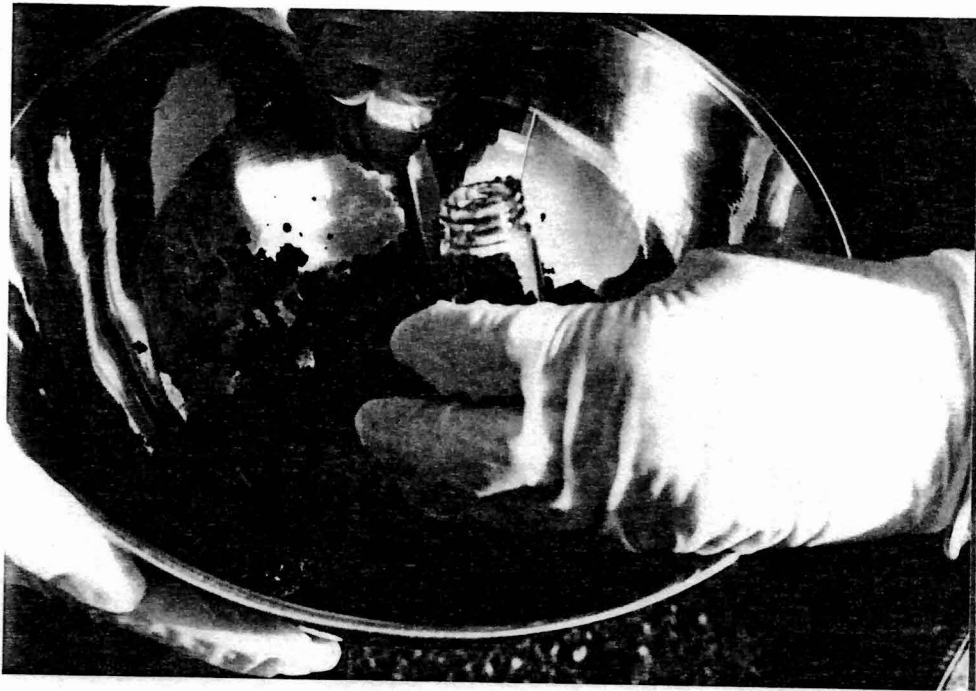
140. Close-up of area after completion of
sampling activities at Fuel Oil Transfer
Pumps near Tank 603 (G015).



141. Surface soil samples from Fuel Oil Transfer Pumps near Tank 603 (G015).



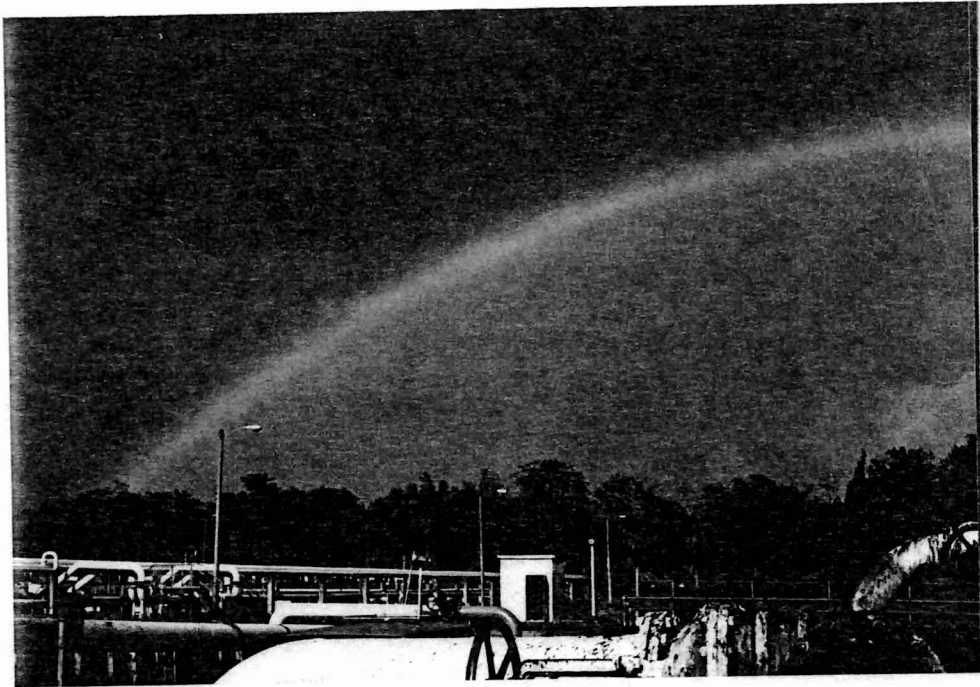
142. Close-up view of sampling area at Fuel Oil Transfer Pumps at Cummins Diesel after removal of surface soil (G016).



143. Close-up of VOA sample collection at Fuel Oil Transfer Pumps at Cummins Diesel area (G016).



144. View looking east from sample collection area at Fuel Oil Transfer pumps at Cummins Diesel engine.



145. View looking northeast from sample collection area at Fuel Oil Transfer Pumps at Cummins Diesel engine.



146. Close-up view of collection of organics/inorganics surface soil sample at Fuel Oil Transfer Pumps at Cummins Diesel engine (G016).



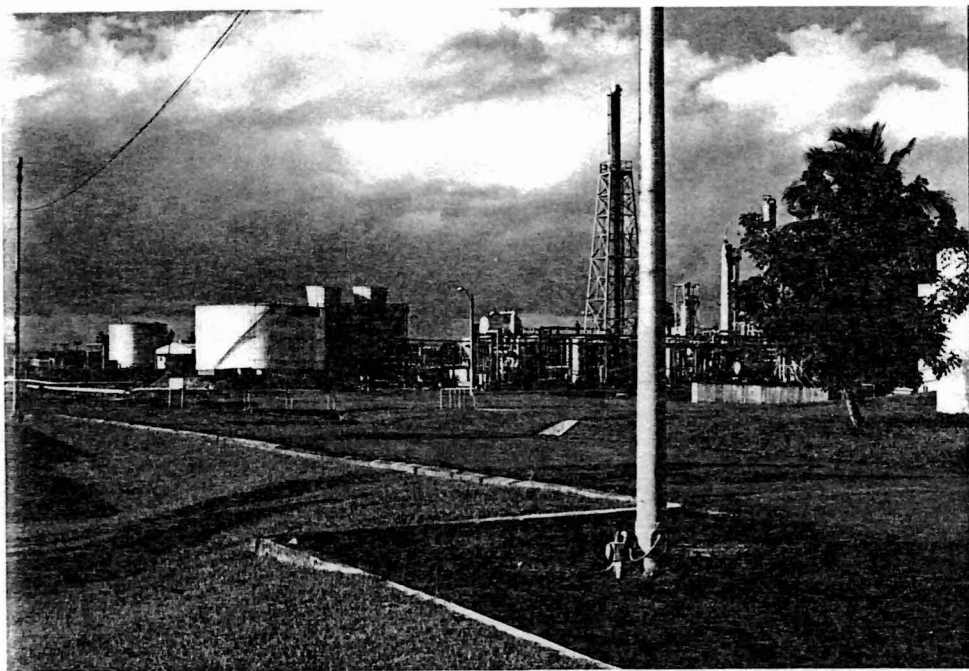
147. Close-up of hole used for surface soil sample collection at Fuel Oil Transfer Pumps at Cummins Diesel engine (G016).



148. Surface soil samples from Fuel Oil Transfer Pumps at Cummins Diesel engine (G016).



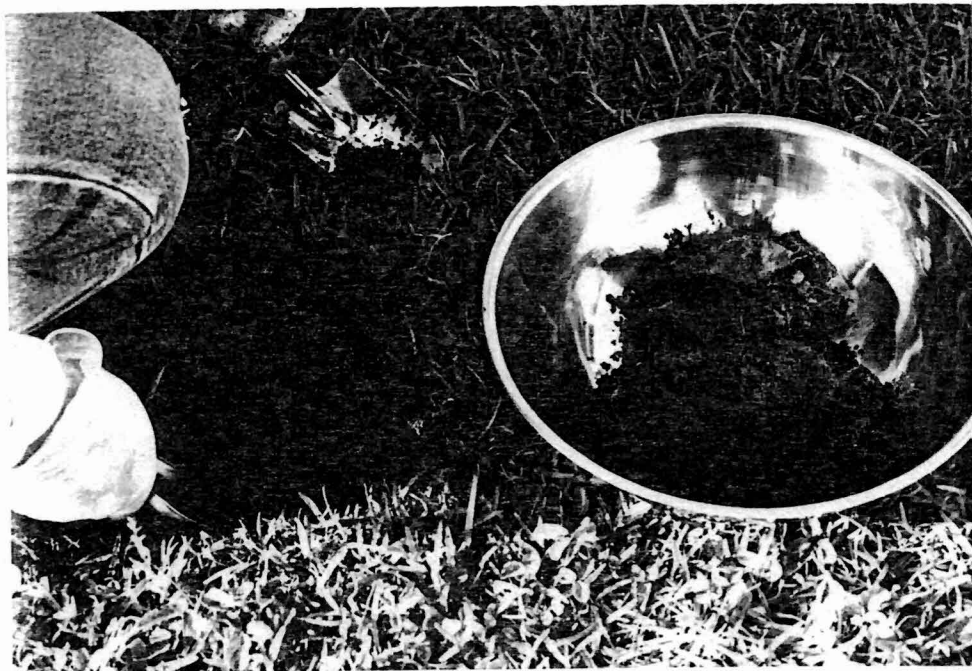
149. View of first Background surface soil sampling area before removal of surface vegetation (G017).



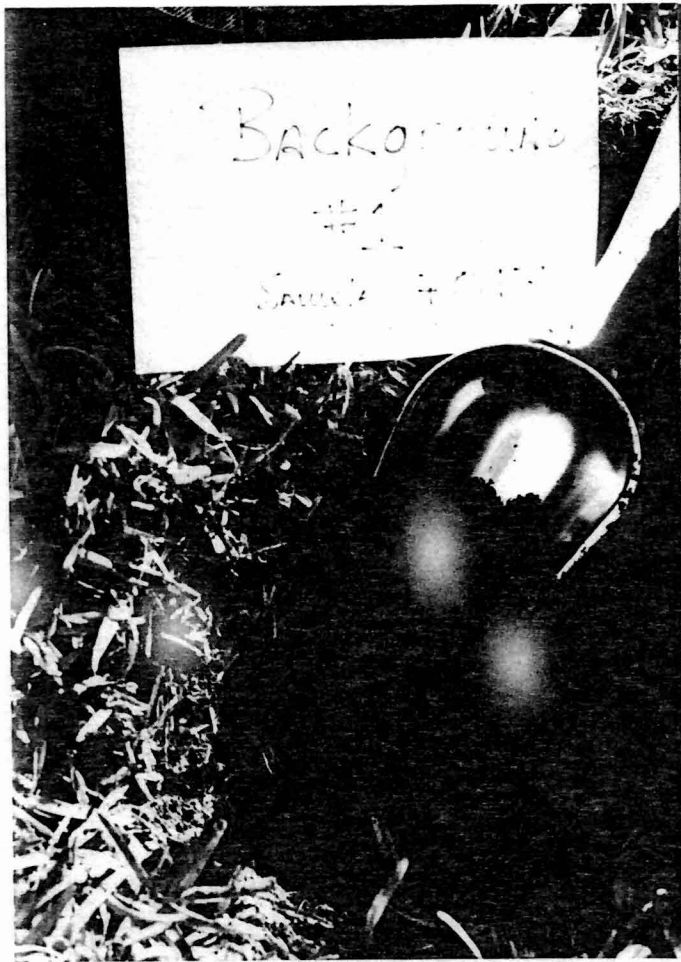
150. View looking northeast from first Background sampling area.



151. View looking southwest from first Background sampling area.



152. View of organics/inorganics surface soil (in stainless steel pan) from first Background area (G017).



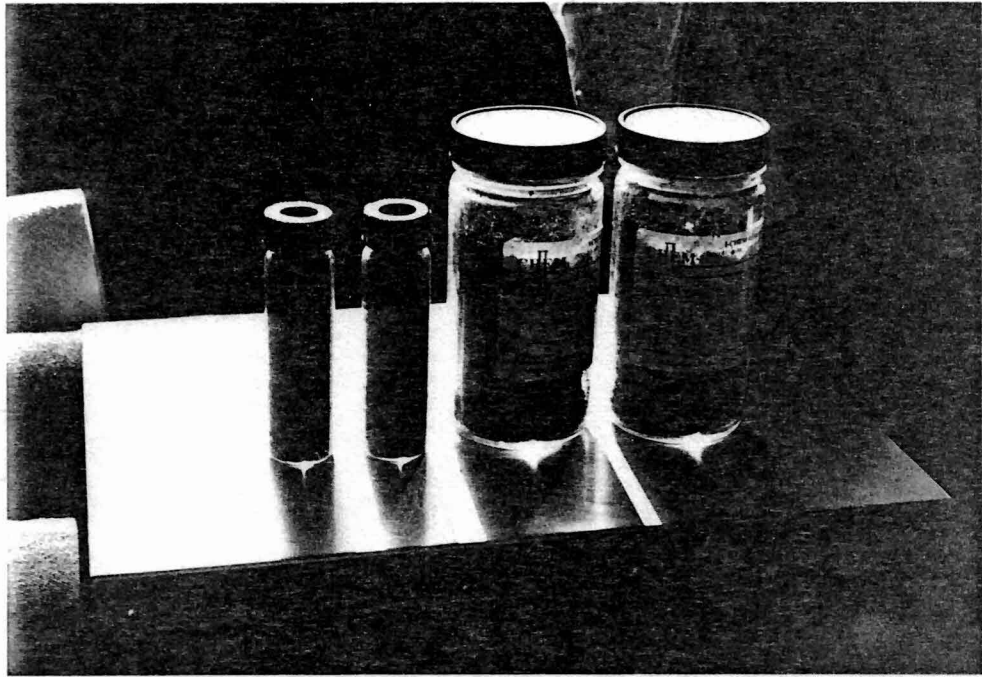
153. Close-up of hole used for surface soil sample collection at first Background area (G017).



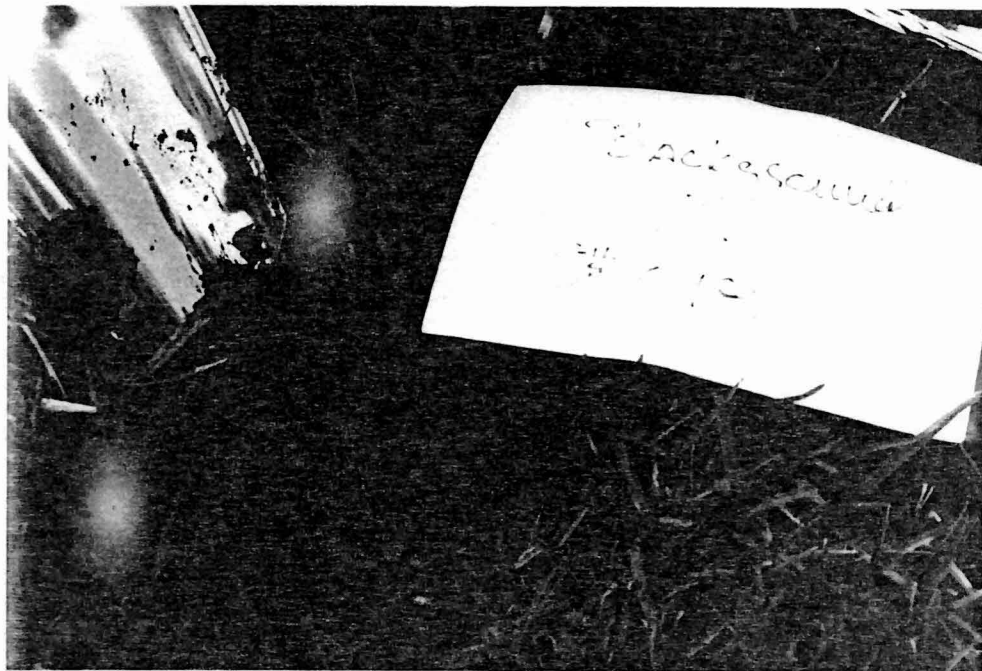
154. Close-up of organics/inorganics surface soil sample from first Background area after compositing, quartering, and homogenizing (G017).



155. View of area used for first Background sample after completion of sampling activities (G017).



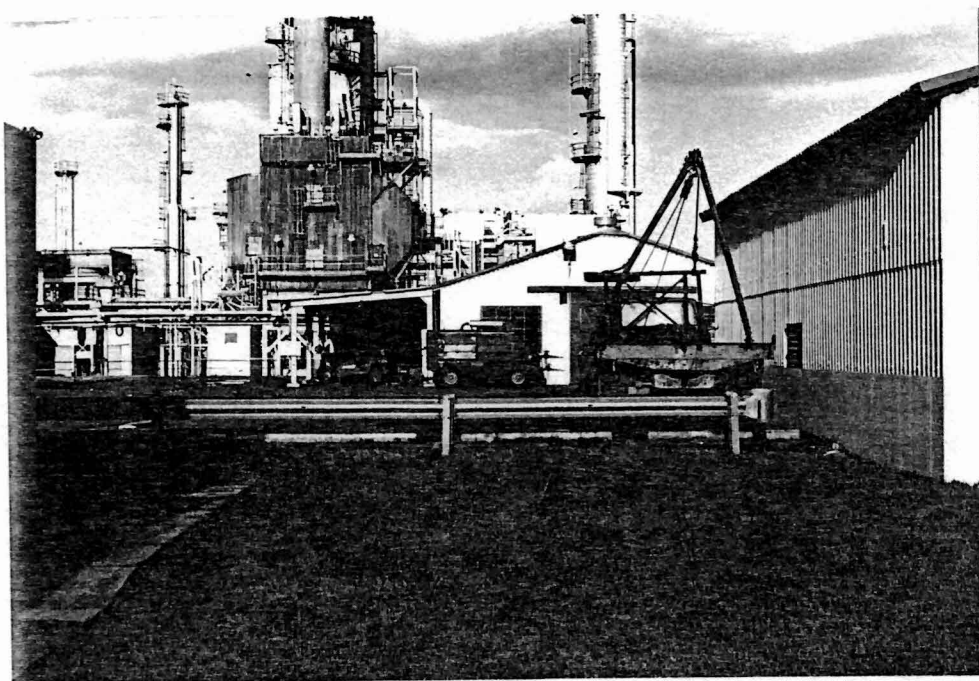
156. Close-up of surface soil samples from first Background area (G017).



157. Close-up view of second Background sampling area (G018).



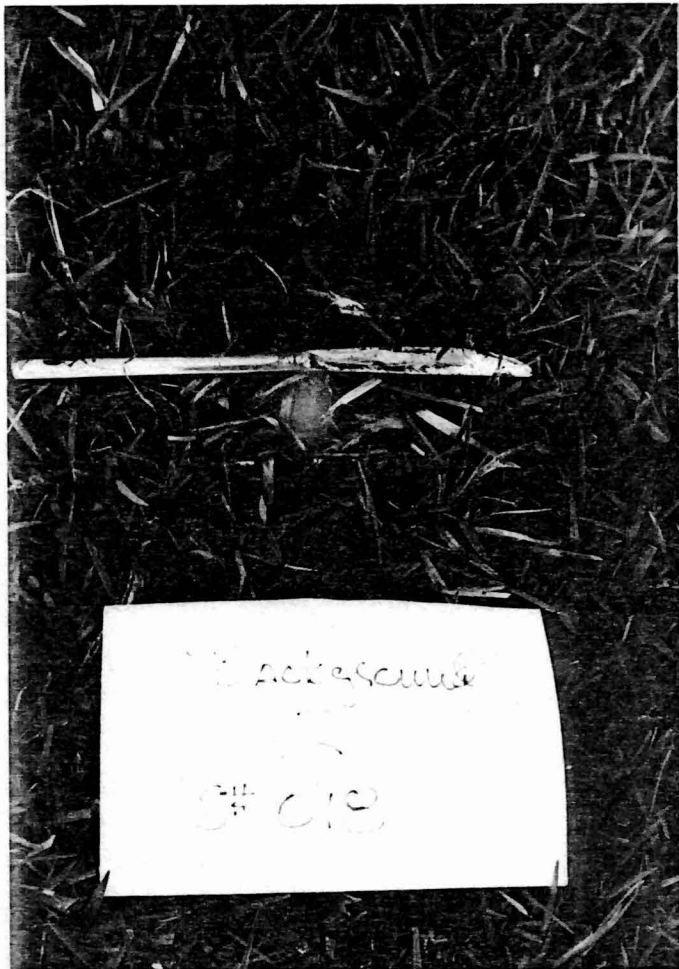
158. Close-up view of organics/inorganics surface soil sample after quartering and before final sample homogenization at second Background area (G018).



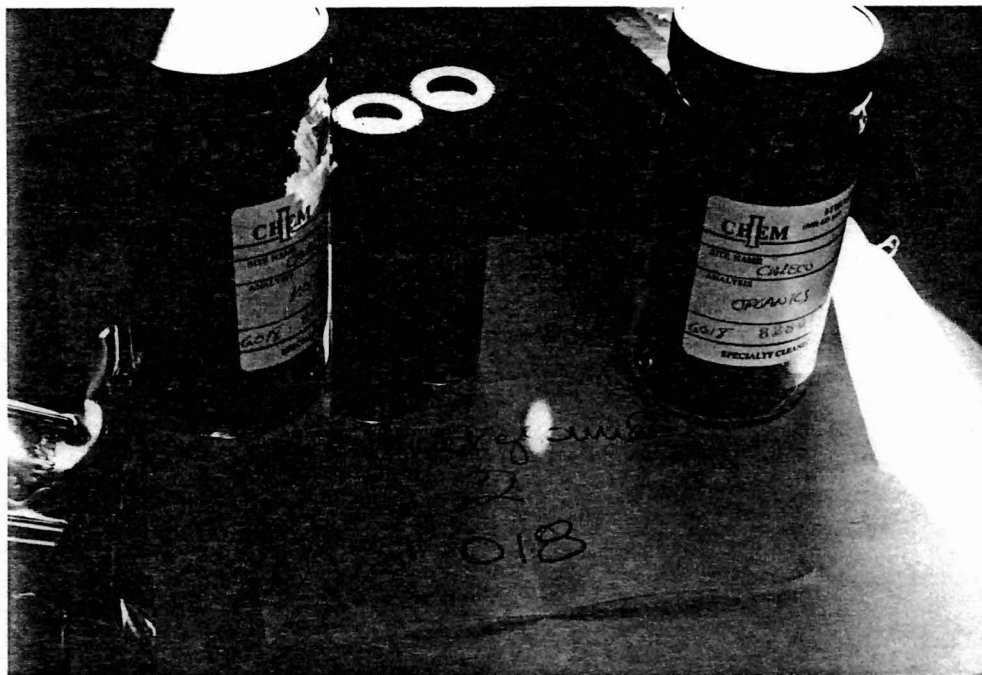
159. View looking east from second Background sampling area.



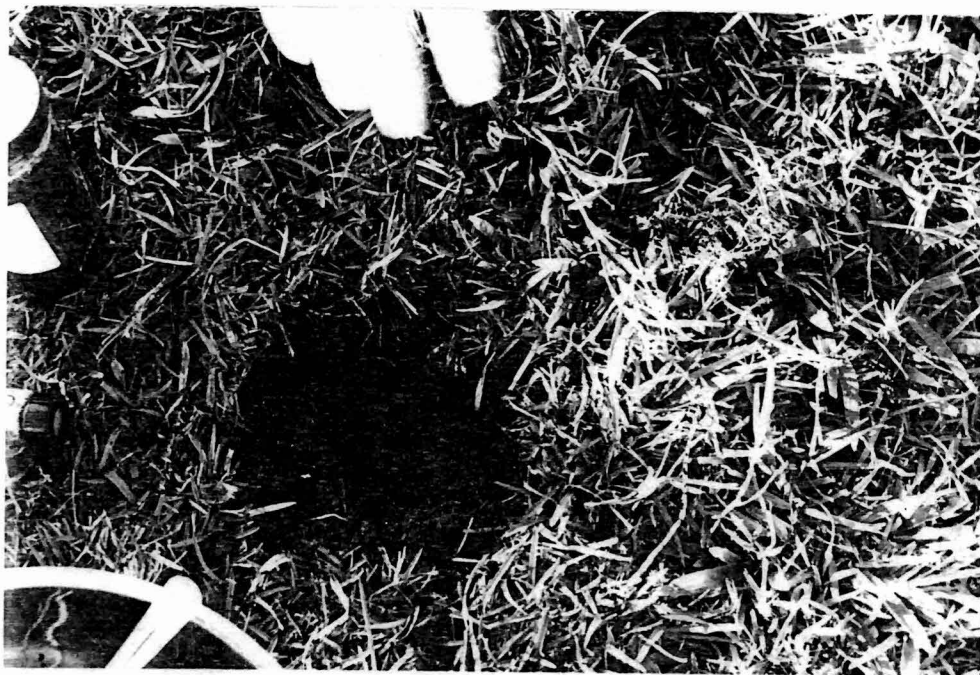
160. View looking west from second Background sampling area.



161. View of second Background area after completion of sampling activities (G018).



162. Close-up of second Background surface soil samples (G018).



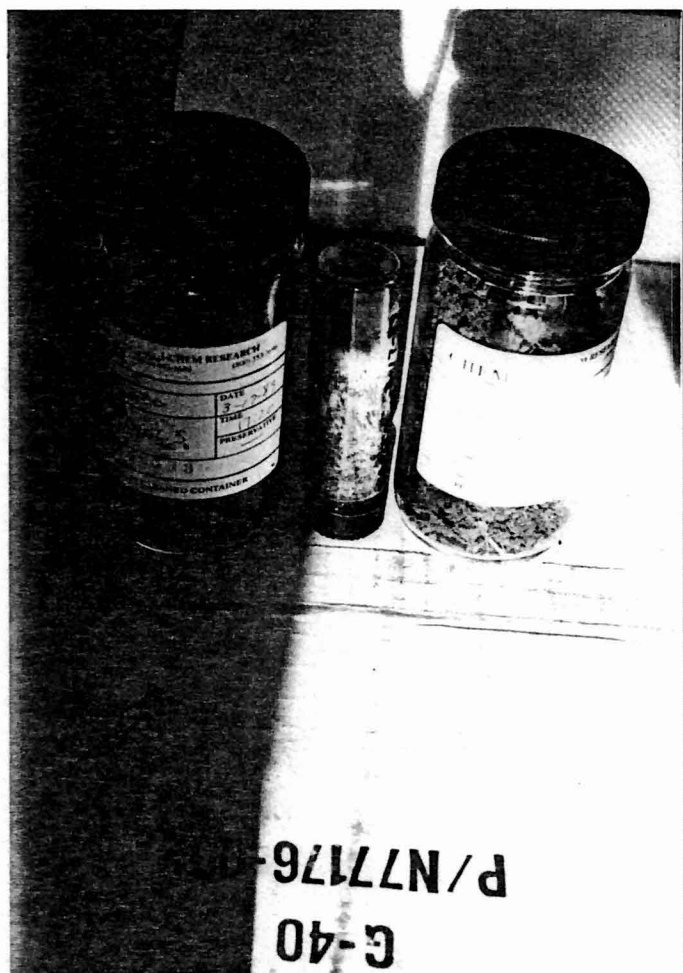
163. Close-up of third Background sampling area after removal of surface vegetation (G018).



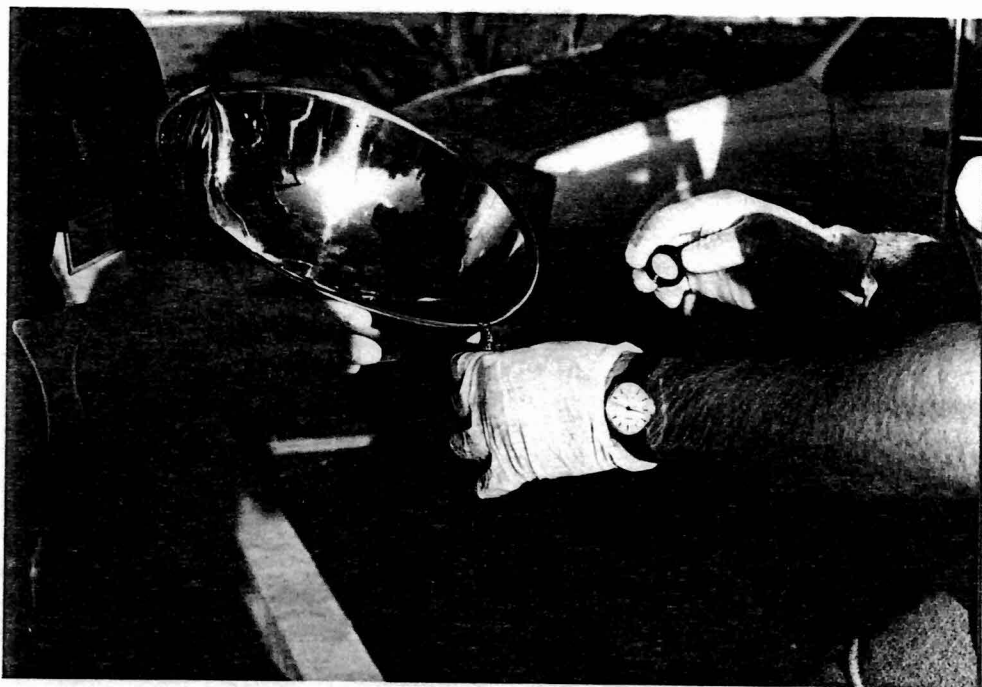
164. View looking east from third Background sampling area.



165. View of third Background area after completion of sampling activities (G019).



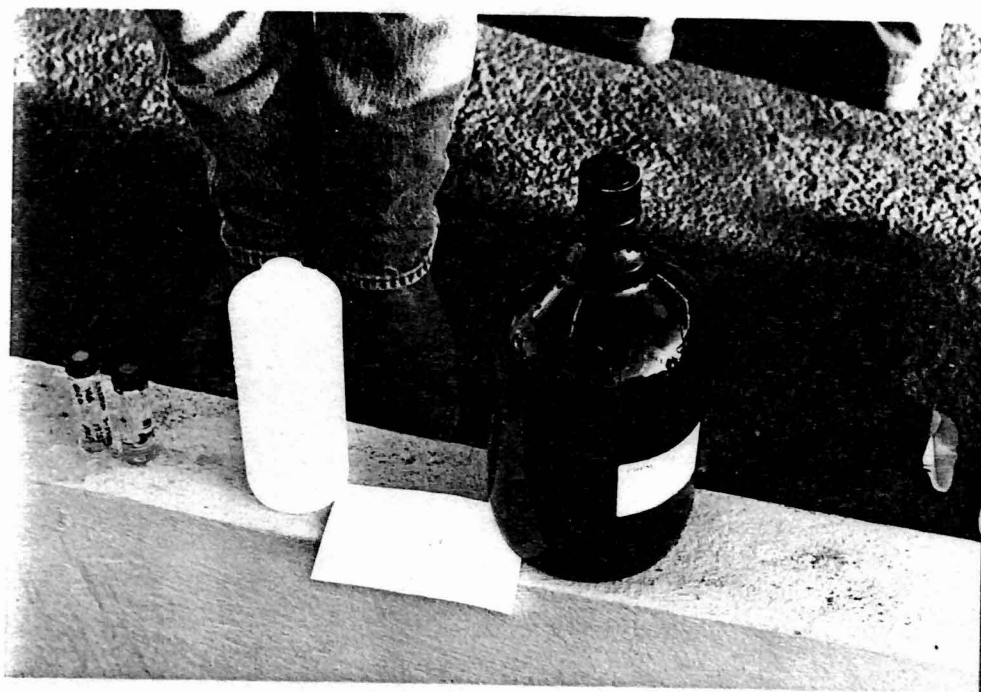
166. Close-up of third Background surface soil samples (G019).



167. Collection of VOA blank for knife and bowl (G020).



168. Collection of organics samples for knife and bowl blank (G020).



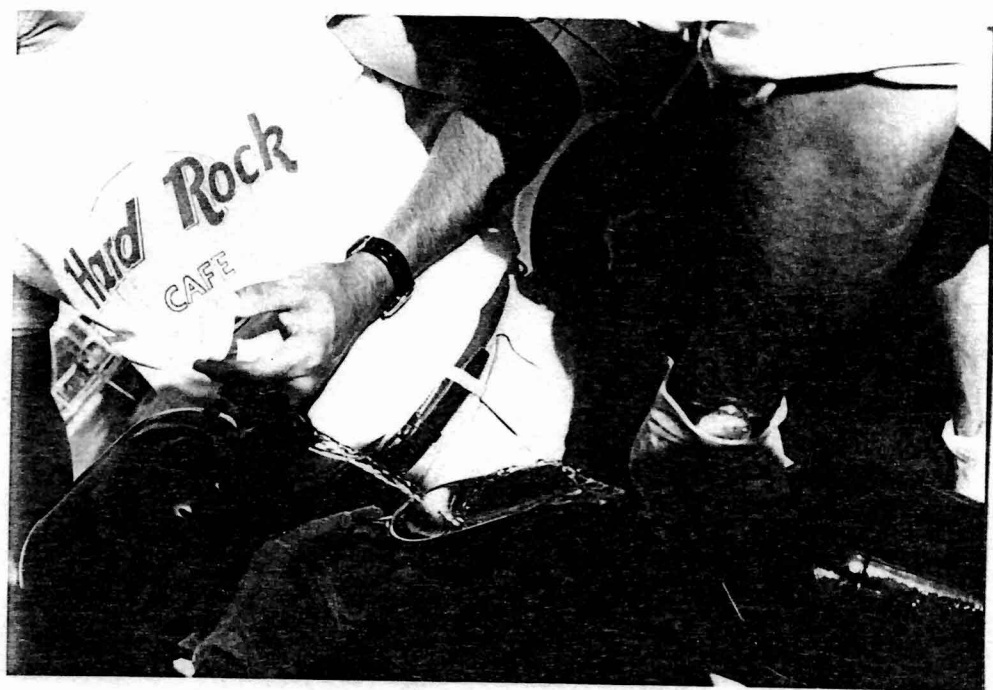
169. Close-up of bowl and knife blank samples (G020).



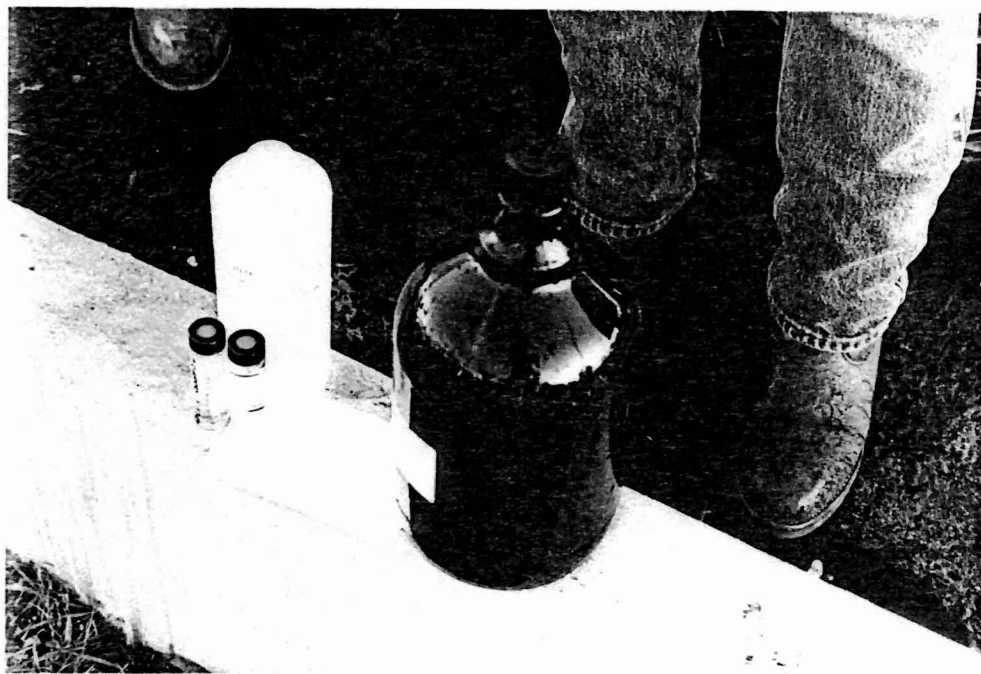
170. Collection of VOA blank for scoop.



171. Collection of inorganics sample for scoop blank (G021).



172. Collection of organics sample for scoop blank (G021).



173. Close-up of Scoop blank samples (G021).

Section 2.8.4
QA/QC FIELD LOG

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Oil Stained

Sandy Loam

w/ GRAVEL

Heat Exchanger Bundle
@ HC-SC

GOO1

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - (C)*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Feb 21*
10. Record sample information in the field logbook. *Yes*

Debutanizer
Reboiler

GC02

Oil Stained

Sandy Loam

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop.
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container.
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended.
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters.
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

*TUBE OIL GAS
Container*

*No
Sample*

GC03

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Reddish Brown

Clay Loam

*CRUDE OIL CHARGE PUMP
G-0003*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

*Oil stained soil
w/ gravel*

*CRUDE OIL
#1
w/ Piping @ CUT #1*

GOOD

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - C*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

*Brownish Red
CLAY LOAM*

*Asphalt - Healer
Under Area G005*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - 0*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Reddish Brown

Clay Loam

*Loading Rack
Pump Area G006*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O-Site IS [Sample w/ resp]*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *NO - NOT NECESSARY*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Oil Stained Sand

w/ For Hydro Sol

*Solids Knockout Pit
G-007*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - Low Readiness*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Oil Stained

Reddish Brown

Sandy Clay

Duplicate

API Sep 6000

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - Low Risk*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Oil soaked

Reddish Yellow

Sandy Clay

*Corrugated Pipe
Excavation Good*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - 0-1*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Oil Saturated
Sandy Clay

8-10-01
Oil & Gas
1000
OK

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - 0-2*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Dark, oil stained soil

Pet Hydro Ecor

Gran Wavel

*Sup Six Tank 1001
P&H*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - C*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

*Sealed
in bag
with liner*

*Note: Collect
two samples —
1 used for VOCs & Organics
2nd for Inorganics*

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Surge Tank ET-1
Gr 013

Oil Stained

Yellow Red Clay Loam

4.	Basic Biol
5.	Tutor
6.	Reactor 1
7.	
9.	
9.	
10.	

1. Monitor the air adjacent to the sampling location with an determine the potential for hazardous conditions or toxic effects workers. *Yes - 0*
2. Using a stainless steel trowel, clear the area to be sampled of surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

Oil Stained

Reddish Brown

Sandy Clam

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
8. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Oil stained
Reddish Brown
Sandy Clay

Fuel Oil Transfer
Pump Area Q-015

(Investigate)
603

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - C*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Fuel Oil Transfer Pumps @ Curvettus
Pump Area
G016

Oil
Stripped
ish
Sand

5.1.1 Surface Soil Sampling Procedures

- #1
Backlog -
GO 17
1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes*
 2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
 3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
 4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
 5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
 6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
 7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
 9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
 9. Complete all chain-of-custody documents. *Yes*
 10. Record sample information in the field logbook. *Yes*

Dark Brown

Sandy Loam

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers. *Yes - O*
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material. *Yes*
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop. *Yes*
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container. *Yes*
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended. *Yes*
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters. *Yes*
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice. *Yes*
9. Refill the hole from which the sample was collected with the remaining excavated soil. *Yes*
9. Complete all chain-of-custody documents. *Yes*
10. Record sample information in the field logbook. *Yes*

Backg - 100
G

Mark Brown
Laney, Jan

5.1.1 Surface Soil Sampling Procedures

1. Monitor the air adjacent to the sampling location with an HNU to determine the potential for hazardous conditions or toxic effects on workers.
2. Using a stainless steel trowel, clear the area to be sampled of any surface debris or cover material.
3. Begin collecting soil sample using a pre-cleaned, stainless steel scoop.
4. Place the sample into a glass or stainless steel pan and mix thoroughly (note: for volatile analysis, mixing is not recommended). Place the sample into the appropriate sample container.
5. Check that a teflon liner is present in the cap, if required. Secure the cap tightly. The chemical preservation of solids is not generally recommended.
6. Label the sample bottle with the appropriate sample tag. Be sure to label the tag carefully and clearly, addressing all categories and parameters.
7. Wrap each sample container in a clean plastic bag and place in a clean plastic cooler with ice.
9. Refill the hole from which the sample was collected with the remaining excavated soil.
9. Complete all chain-of-custody documents.
10. Record sample information in the field logbook.

M
COP
Blas

Blas
COP
M

Section 2.8.5

QA/QC AUDIT

**QUALITY ASSURANCE REPORT OF SITE SAMPLING
AT THE CARIBBEAN GULF FACILITY
MARCH 17, 1989**

At all sampling locations, site sampling was conducted using standard operating procedures as described in the final site sampling plan. The A. T. Kearney Sampling Team made every effort to follow the accepted procedures and obtain representative samples. A total of 19 environmental samples were collected from the Caribbean Gulf facility. These included three background soil samples, and one surface soil sample from the Heat Exchanger Bundle area, the Debutanizer Reboiler area, the Crude Unit Charge Pump area, the Piping at Crude Unit #1, the Asphalt Heater unit area, the Loading Rack pump area, the Solids Knockout Pit, the API Separator, the Corrugated Plate Interceptor, Slop Oil Tank 1000, Slop Oil Tank 1001, the Digester, Surge Tank ET-1, the Equalization Basin, the Fuel Oil Transfer Pump near Tank 603, and the Fuel Oil Tank near the Cummins Diesel engine. There were no modifications to the standard sampling protocols. The only deviation from the sampling plan was to collect two separate samples at the Digester area due to heavy rainfall after the collection of the VOA and organics sample. After the rain had ceased, a second sample was collected and composited from the same sampling location. Although the soil had been wetted by the rainfall, this should not affect the integrity of the inorganics sample collected from this area.

Sixteen samples were collected to describe the potential for a release from the waste management areas of the Caribbean Gulf facility. In addition, quality control samples included three background soil samples and equipment blanks for the scoop, and for the bowl and knife. The overall quality of the sampling episode at the Caribbean Gulf facility was more than adequate. Sample collection was conducted in a proper manner, and the specific locations employed for sample collection should provide an adequate description of the potential for a release from the waste management areas investigated.



K. C. Donnelly
Quality Assurance Officer

QA/QC
FIELD
AUDIT